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CLAIMS

1. A surface radiation conversion element for converting electromagnetic wave, which is radiated from a radiation source, to surface radiation, characterized in that an element body has a generally plate shape constituted with a material having a larger electric permittivity than outside and, in the inside of the element body, a plurality of closed spaces are disposed whose electric permittivity is smaller than that of the material constituting the element body and whose surfaces opposite to a radiation surface are generally flat.

2. The surface radiation conversion element according to claim 1, characterized in that a plurality of closed spaces are disposed whose surfaces opposite to said radiation surface are generally parallel to the radiation surface.

3. The surface radiation conversion element according to claim 1, characterized in that a plurality of closed spaces are adjacently disposed whose surfaces opposite to said radiation surface are generally parallel to each other.

4. The surface radiation conversion element according to claim 1, characterized in that a first member having a radiation source disposed on a side thereof and a second member disposed on the radiation surface side are constituted to be in close adhesion, and said closed spaces are formed between said first member and said second member.

5. The surface radiation conversion element according to claim 4, characterized in that at least one member of said first member and said second member has recesses formed therein, and said recesses are disposed to constitute said closed spaces by joining the first member and the second member.

6. The surface radiation conversion element according to claim 1, characterized in that a total reflection restraining layer such as a scattering layer is disposed in the radiation surface.

7. The surface radiation conversion element according to claim 1, characterized in that said closed spaces are filled with solid layers having a smaller electric permittivity than the material constituting the element body.

8. A liquid crystal display device having a surface radiation conversion element, characterized in that an element body of the surface radiation conversion element has a generally plate shape constituted with a material having a larger electric permittivity than outside and, in the inside of the element body, a plurality of closed spaces are disposed whose electric permittivity is smaller than that of the material constituting the element body and whose surfaces opposite to a radiation surface are generally flat.

9. The liquid crystal display device according to claim 8, characterized in that a plurality of closed spaces are disposed whose surfaces opposite to said radiation surface are generally parallel to the radiation surface.

10. The liquid crystal display device according to claim 8, characterized in that a plurality of closed spaces are adjacently disposed whose surfaces opposite to said radiation surface are generally parallel to each other.

11. The liquid crystal display device according to claim 8, characterized in that a first member having a radiation source disposed on a side thereof and a second member disposed on the radiation surface side are constituted to be in close adhesion, and said closed spaces are formed between said first member and said second member.

12. The liquid crystal display device according to claim 8, characterized in that at least one member of said first member and said second member has recesses formed therein, and said recesses are disposed to constitute said closed spaces by joining the first member and the second member.

13. The liquid crystal display device according to claim 12, characterized in that a total reflection restraining layer such as a scattering layer is disposed in the radiation surface.

14. The liquid crystal display device according to claim 8, characterized in that said closed spaces are filled with solid layers having a smaller electric permittivity than the material constituting the element body.

15. A method of producing a surface radiation conversion element for converting electromagnetic wave, which is radiated from a radiation source, to surface radiation, characterized in that a plurality of recesses are formed in a joining surface of at least one member of a first member and a second member having a generally equal electric permittivity, and closed spaces having a smaller electric permittivity than the first member and the second member are formed with said recesses by joining the first member and the second member at the surface having the recesses formed therein.

16. The method of producing a surface radiation conversion element according to claim 15, characterized in that said first member is constituted with a plate material such as an acrylic light guide, said second member is constituted with a sheet member such as a diffusion sheet containing polycarbonate as a principal material, and said first member and said second member are joined by adhesion.

17. The method of producing a surface radiation conversion

element according to claim 15, characterized in that said recesses are formed in one member of the first member and the second member, and a joining surface of the other member to which the one member having said recesses formed therein is joined is formed to be generally coplanar.

18. The method of producing a surface radiation conversion element according to claim 15, characterized in that a total reflection restraining layer such as a diffusion layer is formed in said first member or said second member in a surface opposite to the joining surface.

19. The method of producing a surface radiation conversion element according to claim 15, characterized in that said recesses are filled with solid layers having a smaller electric permittivity than the first member and the second member before said first member and said second member are joined.